EUROPE FLOOD MAP

Consistent mapping of major rivers across a range of European countries, to enable re/insurers to easily compare exposure between any or all of these countries.

The maps provide the underlying information for JBA's Europe probabilistic flood model, which enables the calculation of return period losses across Europe. At up to 10m resolution and covering 288,500km of river, the maps are suitable for use in both underwriting and accumulation modelling.

Benefits

Our river flood maps of Europe give re/insurers and brokers access to consistent and reliable data for different return periods, across much of Europe. This will simplify and improve the task of assessing exposure in a pan-Europe portfolio.

Our approach

We created a hydrological model using an index flood approach, based on statistical analysis of historic river flow data. From this we could estimate return period flows at 500m intervals along every modelled watercourse.

The calculated flows for all watercourses with an upstream drainage area exceeding the threshold were routed across the floodplain in order to map the extent and depth of inundation. This generated river hazard mapping for a total river length of approximately 288,500km.

Sophisticated hydraulic modelling

Our own 2D hydraulic modelling software, JFlow, was used for all the modelling. JFlow has received widespread critical acclaim for its accuracy and its ability to fully solve shallow water equations.
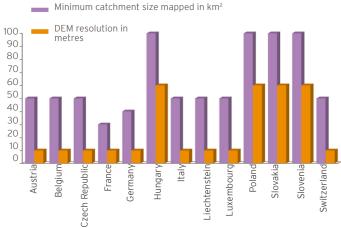
The 10 metre resolution terrain data was provided by Intermap Technologies Inc and the 60 metre resolution data, by Eurographics.

Contact details

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